Available online at www.sciencedirect.com
ScienceDirect
Geoderma 140 (2007) 455 - 456
GEODERMA
www.elsevier.com/locate/geoderma

Contents Volume 140, 2007

Research papers

Sorption of fipronil and its sulfide derivative by soils and goethite
C.S. Miranda Masutti and A.R. Mermut . . . 1

Laboratory studies on glyphosate transport in soils of the Maresme area near Barcelona, Spain: Transport model parameter estimation
L. Candela, J. Álvarez-Benedí, M.T. Condesso de Melo and P.S.C. Rao . . . 8

Molecular-scale heterogeneity of humic acid in particle-size fractions of two Iowa soils
J. Mao, X. Fang, K. Schmidt-Rohr, A.M. Carmo, L.S. Hundal and M.L. Thompson . . . 17

Temporal dynamics in arylsulfatase enzyme activity in various microenvironments along a climatic transect in Israel
S. Zwikel, H. Lavee and P. Sarah . . . 30

Spatial variability in potassium release among calcareous soils of western Iran
M. Jalali . . . 42

Heavy metal contamination along a soil transect in the vicinity of the iron smelter of Kremikovtzi (Bulgaria)
R. Schulin, F. Curchod, M. Mondeshka, A. Daskalova and A. Keller . . . 52

Robust estimation of the variogram by residual maximum likelihood
B.P. Marchant and R.M. Lark . . . 62

Land suitability classification using different sources of information: Soil maps and predicted soil attributes in Jordan
F.M. Ziadat . . . 73

Weighted sample variograms as a tool to better assess the spatial variability of soil properties
X. Emery and J.M. Ortiz . . . 81

Tillage affects soil aggregation parameters linked with wind erosion
G.G. Hevia, M. Mendez and D.E. Buschiazzo . . . 90

Study of the energy abrasion rates of five soil types subject to oblique impacts
W. Ta . . . 97

Multi-scale variability in soil aggregate stability: Implications for understanding and predicting semi-arid grassland degradation
S.B. Bird, J.E. Herrick, M.M. Wander and L. Murray . . . 106

A single layer soil water balance model for estimating deep drainage (potential recharge): An application to cropped land in semi-arid North-east Nigeria
V.H.M. Eilers, R.C. Carter and K.R. Rushton . . . 119

Evaluation of the use of soil depth and parent material data when predicting soil organic carbon concentration from LOI values
M.S. Cresser, R.L. Gonzalez and A. Leon . . . 132

Distribution of hydrous aluminium and iron over density fractions depends on organic matter load and ultrasonic dispersion
K. Kaiser and G. Guggenberger . . . 140

Water repellency and distribution of hydrophilic and hydrophobic compounds in soil aggregates from different tillage systems
E. Urbanek, P. Hallett, D. Feeney and R. Horn . . . 147

Competitive adsorption of trace elements in calcareous soils of western Iran
M. Jalali and S. Moharrami . . . 156

Enhanced soil toxic metal fixation in iron (hydr)oxides by redox cycles
M. Contin, C. Mondini, L. Leita and M. De Nobili . . . 164

Effects of soil acidification and forest type on water soluble soil organic matter properties
T. Ohno, I.J. Fernandez, S. Hiradate and J.F. Sherman . . . 176

Potassium release and fixation as a function of fertilizer application rate and soil parent material
M. Simonsson, S. Andersson, Y. Andrist-Rangel, S. Hillier, L. Mattsson and I. Öborn . . . 188

Irrigation with treated wastewater under two different irrigation methods: Effects on hydraulic conductivity of a clay soil
A.K. Bhardwaj, D. Goldstein, A. Azenkot and G.J. Levy . . . 199

Comparison of different approaches for modelling heavy metal transport in acidic soils
K. Michel, M. Roose and B. Ludwig . . . 207

Contents Volume 140, 2007 . . . 215

Special Issue

Integrating soil and crop research with system models in the midwest USA

Edited by

L.R. Ahuja and J.L. Hatfield

Integrating soil and crop research with system models in the midwest USA: Purpose and overview of the Special Issue
L.R. Ahuja and J.L. Hatfield . . . 217
Empirical analysis and prediction of nitrate loading and crop yield for corn–soybean rotations
R.W. Malone, L. Ma, D.L. Karlen, T. Meade, D. Meek, P. Heilman, R.S. Kanwar and J.L. Hatfield. . . . 223
Role of landscape and hydrologic attributes in developing and interpreting yield clusters
A. Bakhsh, R.S. Kanwar and R.W. Malone . . . 235
RZWQM simulation of long-term crop production, water and nitrogen balances in Northeast Iowa
L. Ma, R.W. Malone, P. Heilman, D.L. Karlen, R.S. Kanwar, C.A. Cambardella, S.A. Saseendran and L.R. Ahuja. . . . 247
RZWQM simulated effects of crop rotation, tillage, and controlled drainage on crop yield and nitrate-N loss in drain flow
L. Ma, R.W. Malone, P. Heilman, D.B. Jaynes, L.R. Ahuja, S.A. Saseendran, R.S. Kanwar and J.C. Ascough II. . . . 260
Simulated N management effects on corn yield and tile-drainage nitrate loss
R.W. Malone, L. Ma, P. Heilman, D.L. Karlen, R.S. Kanwar and J.L. Hatfield . . . 272
Sensitivity of tile drainage flow and crop yield on measured and calibrated soil hydraulic properties
L. Ma, R.W. Malone, P. Heilman, L.R. Ahuja, T. Meade, S.A. Saseendran, J.C. Ascough II and R.S. Kanwar . . . 284
Simulating management effects on crop production, tile drainage, and water quality using RZWQM–DSSAT
S.A. Saseendran, L. Ma, R. Malone, P. Heilman, L.R. Ahuja, R.S. Kanwar, D.L. Karlen and G. Hoogenboom . . . 297
Evaluating and predicting agricultural management effects under tile drainage using modified APSIM
R.W. Malone, N. Huth, P.S. Carberry, L. Ma, T.C. Kaspar, D.L. Karlen, T. Meade, R.S. Kanwar and P. Heilman . . . 310

Special Issue

Pedometrics 2005

Edited by

S. Grunwald, D.J. Brown and P. Goovaerts

Preface
S. Grunwald, D.J. Brown and P. Goovaerts. . . . 323
Spatial prediction of soil properties using EBLUP with the Matérn covariance function
B. Minasny and A.B. McBratney . . . 324
The Matérn variogram model: Implications for uncertainty propagation and sampling in geostatistical surveys
B.P. Marchant and R.M. Lark. . . . 337
Spatially-Balanced Complete Block designs for field experiments
H.M. van Es, C.P. Gomes, M. Sellmann and C.L. van Es. . . . 346
Automated predictive ecological mapping in a Forest Region of B.C., Canada, 2001–2005
R.A. MacMillan, D.E. Moon and R.A. Coupé . . . 353
Forest soil acidification assessment using principal component analysis and geostatistics
L. Borůvka, L. Mládková, V. Penížek, O. Drábek and R. Vašát . . . 374
Comparing sampling needs for variograms of soil properties computed by the method of moments and residual maximum likelihood
R. Kerry and M.A. Oliver . . . 383
The analysis of ranked observations of soil structure using indicator geostatistics
R. Kerry and M.A. Oliver . . . 397
Methods to interpolate soil categorical variables from profile observations: Lessons from Iran
T. Hengl, N. Toomanian, H.I. Reuter and M.J. Malakouti . . . 417
Incorporation of spectral data into multivariate geostatistical models to map soil phosphorus variability in a Florida wetland
R.G. Rivero, S. Grunwald and G.L. Bruland . . . 428
Using a global VNIR soil-spectral library for local soil characterization and landscape modeling in a 2nd-order Uganda watershed
D.J. Brown. . . . 444

Contents Volume 140, 2007 . . . 455